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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,974	01/24/2006	Christian Hesse	14219-093US1 P2003.0036 U	7920
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EXAMINER				
CHEN, KIN CHAN				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
05/22/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary

Application No.

10/542,974

Applicant(s)

HESSE, CHRISTIAN

Examiner

Kin-Chan Chen

Art Unit

1792

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 13, 2009 has been entered.

Claim Rejections - 35 USC § 112

2. Claims 1-7 and 9-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 1, 14, 15, "chemically etching at least portion of the base body, the first electrode, and the second electrode with etching solution to adjust a resistance" is new matter because it is not supported by applicant's specification. Applicant does not set forth said process step in the specification.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 9-15 would be rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0089065) in view of Ito et al. (2002/0011919) or Fujii et al. (US 6, 475, 604), or Inoue et al. (US 6,172,592), insofar as new matters above are not considered.

In a method for forming a device, Fujimoto discloses forming a first electrode and a second electrode on a base body; the first electrode at a location opposite the second electrode on the base body; chemically etching at least a portion of the base body to adjust the resistance of the base body to a predetermined value. See abstract, [0029] [0031], Figures 1A and 1B. Table 1.

Fujimoto teaches measuring the resistance of the base body before and after the chemical etch (for example, Table 1). Fujimoto ([0041]) teaches that when a thermistor chip is dipped in the solvent (e.g., sulfuric acid, paragraph 31, line 5), its thermistor body becomes smaller as a whole during etching, causing the resistance value to increase.

Fujimoto does not indicate that the first and second electrodes are made for a material that is not etched by the etching solution or that is etched, by the etching solution, less than the base body is etched by the etching solution. The disclosure of Fujimoto is not limited to any material for electrodes. It would have been obvious to one with ordinary skill in the art to use commonly used materials for electrodes of thermistor. Ito et al. (for examples, paragraphs 0024, 0060) or (Fujii et al. (col. 20, lines 6-10) and Inoue et al. (col. 5, lines 0-21)) are relied on to show that silver, nickel, tin, palladium and alloy of these metals are commonly used for the electrodes of thermistor. Because it is well known in the art and it is disclosed by Ito or (Fujii and Inoue), hence, it would have been obvious to one with ordinary skill in the art to use silver, nickel, tin, palladium and alloy of these metals as electrodes in Fujimoto in order to provide good electrical conductivity and small contact resistance as stated in Ito et al. (for example, 0060). Since same materials of electrodes are used in the process, it would have been expected same effects and functions as claimed (such as electrode is etchable, by the etching solution, less than the base body is etched by the etching solution). Furthermore, it would have been obvious to one with ordinary skill in the art that electrodes are not etched or highly resistant to the etching solution because the process of Fujimoto is to determine the different amounts of the thermistor body material melted away by measuring the resistance value between the electrodes. Therefore, if the electrodes were etched when in the etching solution, the resistance value between the outer electrodes would have not been measured consistently.

The limitations of claims 1 and 10-15 have been addressed above and rejected for the same reasons, *supra*.

As to dependent claim 2, Fujimoto discloses that the base body comprises a ceramic material, see, for example, [0029].

As to dependent claim 3, see [0029] and [0045].

As to dependent claims 5 and 6, Fujimoto discloses immersing the base body in an etching liquid, such as sulfuric acid, see [0031].

As to dependent claim 7, see Table 1.

Fujimoto teaches that the portion of base body dissolved affects the resistance value [0031], Table 1. Claim 9 differs from Fujimoto by specifying various processing parameters (such as determine a difference between the predetermined valued and a measured value of the resistance and determining a duration for the etching). However, same were known to be result-effective variables and commonly determined by routine experiment. The process of conducting routine experimentations so as to produce an expected result is obvious to one of ordinary skill in the art. In the absence of showing criticality or new, unexpected results, a person having ordinary skill in the art would have found it obvious to modify the prior art by performing routine experiments (by using different process parameters) to obtain optimal result with a reasonable expectation of success.

Dependant claim 4 differs from Fujimoto by specifying various sizes and dimensions (e.g., less than about 3 mm). Because same are merely a matter of choices of design depending on the product requirements and the disclosure of Fujimoto is not

limited to any size of the base body, in absence of showing criticality or unexpected results, it would be obvious to one skilled in the art to use various dimensions in order to accommodate the specific product design and meet the product requirement.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kin-Chan Chen whose telephone number is (571) 272-1461. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call
800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kin-Chan Chen/
Primary Examiner, Art Unit 1792

May 19, 2009